

LISTING OF THE CLAIMS

Claims 1-55 (Cancelled)

Claim 56 (Currently Amended) An electronic structure comprising at least a SiCOH dielectric material in contact with a conductor, said SiCOH dielectric material comprising atoms of Si, C, O and H, wherein H is in the range from 10 to 55 at %, C is in the range from 5 to 45 at %, Si is in the range from 5 to 50 at % and O is in the range from 0 to 45 at % and having a dielectric constant of less than 3.5, a breakdown field of greater than 4.5 MV/cm and a leakage current at 1 MV/cm applied field of less than about 10 nAMPS/cm².

Claim 57 (Cancel)

Claim 58 (Currently Amended) The electronic structure of Claim 56 wherein said SiCOH dielectric material includes ~~Si, C, O, and H~~ wherein ~~the composition~~ H is in the range from 25 to 55 at %, C is in the range from 10 to 40 at %, Si is in the range from 10 to 30 at %, and O is in the range from 10 to 35 at %.

Claim 59 (Previously Presented) The electronic structure of Claim 56 wherein said SiCOH dielectric material includes Si, C, and H without oxygen, and may contain an additive selected from the group consisting of N, F, and Ge.

Claim 60 (Previously Presented) The electronic structure of Claim 56 wherein said SiCOH dielectric material is a graded composition that includes a dense region containing less C at an outer surface which serves as a non-permeable barrier region.

Claim 61 (Previously Presented) The electronic structure of Claim 56 wherein said SiCOH dielectric material is a graded composition which includes three different carbon contents present in different zones of said dielectric material.

Claim 62 (Previously Presented) The electronic structure of Claim 61 wherein said graded composition comprises a first low carbon region having properties similar to Si oxide near a surface of the dielectric material, a region of SiCOH dielectric material, and a second low carbon region having properties similar to Si oxide near a surface opposite that of said first low carbon region, said region of SiCOH dielectric position between said first and second low carbon regions.

Claim 63 (Previously Presented) The electronic structure of Claim 62 wherein an abrupt transition region is located between said first low carbon region and said region of SiCOH dielectric material and between said region of SiCOH dielectric material and said second low carbon region.

Claim 64 (Previously Presented) The electronic structure of Claim 56 wherein said SiCOH dielectric material is a graded composition which includes two different carbon contents present in different zones of said dielectric material.

Claim 65 (Previously Presented) The electronic structure of Claim 64 wherein said graded composition comprises a low carbon region having properties similar to Si oxide near a surface of the dielectric material and a region of SiCOH dielectric material.

Claim 66 (Previously Presented) The electronic structure of Claim 65 wherein an abrupt transition region is located between said low carbon region and said region of SiCOH dielectric material.

Claim 67 (Previously Presented) The electronic structure of Claim 56 wherein said conductor is patterned.

Claim 68 (Previously Presented) The electronic structure of Claim 56 wherein said SiCOH dielectric material and said conductor are components of at least one device selected from the group consisting of an inductor, a transformer, a circuit board, an interconnect structure, and a capacitor.

Claim 69 (Currently Amended) An electronic structure comprising at least one dielectric material comprised of atoms of Si, C, O and H, wherein H is in the range from 10 to 55 at %, C is in the range from 5 to 45 at %, Si is in the range from 5 to 50 at % and O is in the range from 0 to 45 at %, which has a dielectric constant of less than 3.5, a breakdown field of greater than 4.5 MV/cm and a leakage current at 1 MV/cm applied field of less than about 10 nAMPS/cm².

Claim 70 (Cancel)

Claim 71 (Currently Amended) The electronic structure of Claim 69 wherein said SiCOH dielectric material includes Si, C, O, and H wherein the composition H is in the range from 25 to 55 at %, C is in the range from 10 to 40 at%, Si is in the range from 10 to 30 at %, and O is in the range from 10 to 35 at %.

Claim 72 (Previously Presented) The electronic structure of Claim 69 wherein said SiCOH dielectric material includes Si, C, and H without oxygen, and may contain an additive selected from the group consisting of N, F, and Ge.

Claim 73 (New) An electronic structure comprising at least a SiCOH dielectric material in contact with a conductor, said SiCOH dielectric material comprising atoms of Si, C, O and H, having a dielectric constant of less than 3.5 and a graded composition that includes a dense region containing less C at an outer surface which serves as a non-permeable barrier region.

Claim 74 (New) An electronic structure comprising at least a SiCOH dielectric material in contact with a conductor, said SiCOH dielectric material comprising atoms of Si, C, O and H, having a dielectric constant of less than 3.5 and a graded composition which includes three different carbon contents present in different zones of said dielectric material.

Claim 75 (New) The electronic structure of Claim 74 wherein said graded composition comprises a first low carbon region having properties similar to Si oxide

near a surface of the dielectric material, a region of SiCOH dielectric material, and a second low carbon region having properties similar to Si oxide near a surface opposite that of said first low carbon region, said region of SiCOH dielectric position between said first and second low carbon regions.

Claim 76 (New) The electronic structure of Claim 75 wherein an abrupt transition region is located between said first low carbon region and said region of SiCOH dielectric material and between said region of SiCOH dielectric material and said second low carbon region.

Claim 77 (New) An electronic structure comprising at least a SiCOH dielectric material in contact with a conductor, said SiCOH dielectric material comprising atoms of Si, C, O and H, having a dielectric constant of less than 3.5 and a graded composition which includes two different carbon contents present in different zones of said dielectric material.

Claim 78 (New) The electronic structure of Claim 77 wherein said graded composition comprises a low carbon region having properties similar to Si oxide near a surface of the dielectric material and a region of SiCOH dielectric material.

Claim 79 (New) The electronic structure of Claim 78 wherein an abrupt transition region is located between said low carbon region and said region of SiCOH dielectric material.